

(12) INTERNATIONAL APPLICAT. PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
7 February 2002 (07.02.2002)

PCT

(10) International Publication Number
WO 02/09809 A1(51) International Patent Classification: **A61N 1/36**

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RQ, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

(21) International Application Number: **PCT/EP01/08756**

(22) International Filing Date: 27 July 2001 (27.07.2001)

(25) Filing Language: English

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

(26) Publication Language: English

(30) Priority Data:
M12000A 001733 28 July 2000 (28.07.2000) IT

(71) Applicant and

(72) Inventor: **PICCONE, Lorenzo** [IT/IT]; Via La Pira, 10, I-40100 Bologna (IT)(74) Agents: **MINOJA, Fabrizio et al.**, Bianchetti Bracco Minoja S.r.l., Via Rossini, 8, I-20122 Milan (IT)

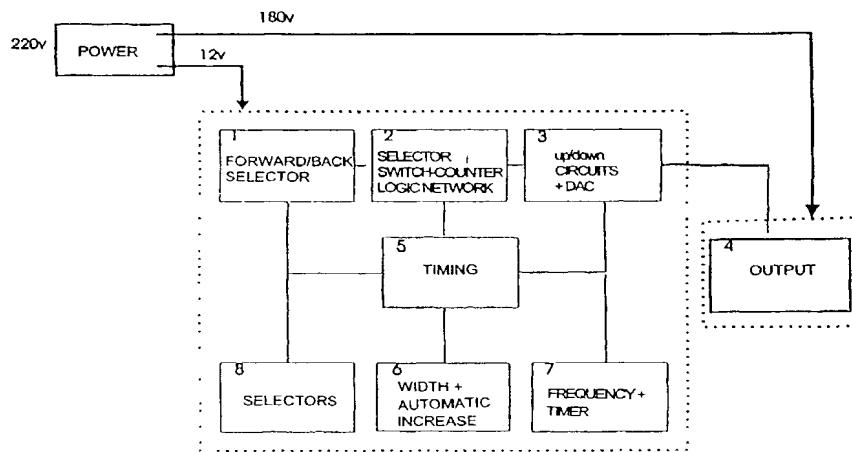
(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette

(54) Title: APPARATUS DESIGNED TO MODULATE THE NEUROVEGETATIVE SYSTEM AND INTEGRATE ITS ACTION WITH THAT OF THE CENTRAL NERVOUS SYSTEM, APPLICATIONS IN THE TREATMENT OF THE VASCULAR SYSTEM AND ORTHOPAEDIC DISORDERS



(57) Abstract: This invention relates to a new type of apparatus designed to modulate the neurovegetative system and integrate the neurovegetative action with that of the central nervous system. The method is not invasive, because it uses pulses transmitted through the skin; the intensity of the stimulus is controlled directly by the patient in order to achieve better integration with the central nervous system. This invention effectively treats vascular disorders resulting from obstruction of the arteries of the legs, heart and brain because it induces vasodilatation and increases blood flow and the production of new blood vessels. The method also improves lesions of the spinal column, especially those affecting the back and neck, and other orthopaedic disorders.

WO 02/09809 A1